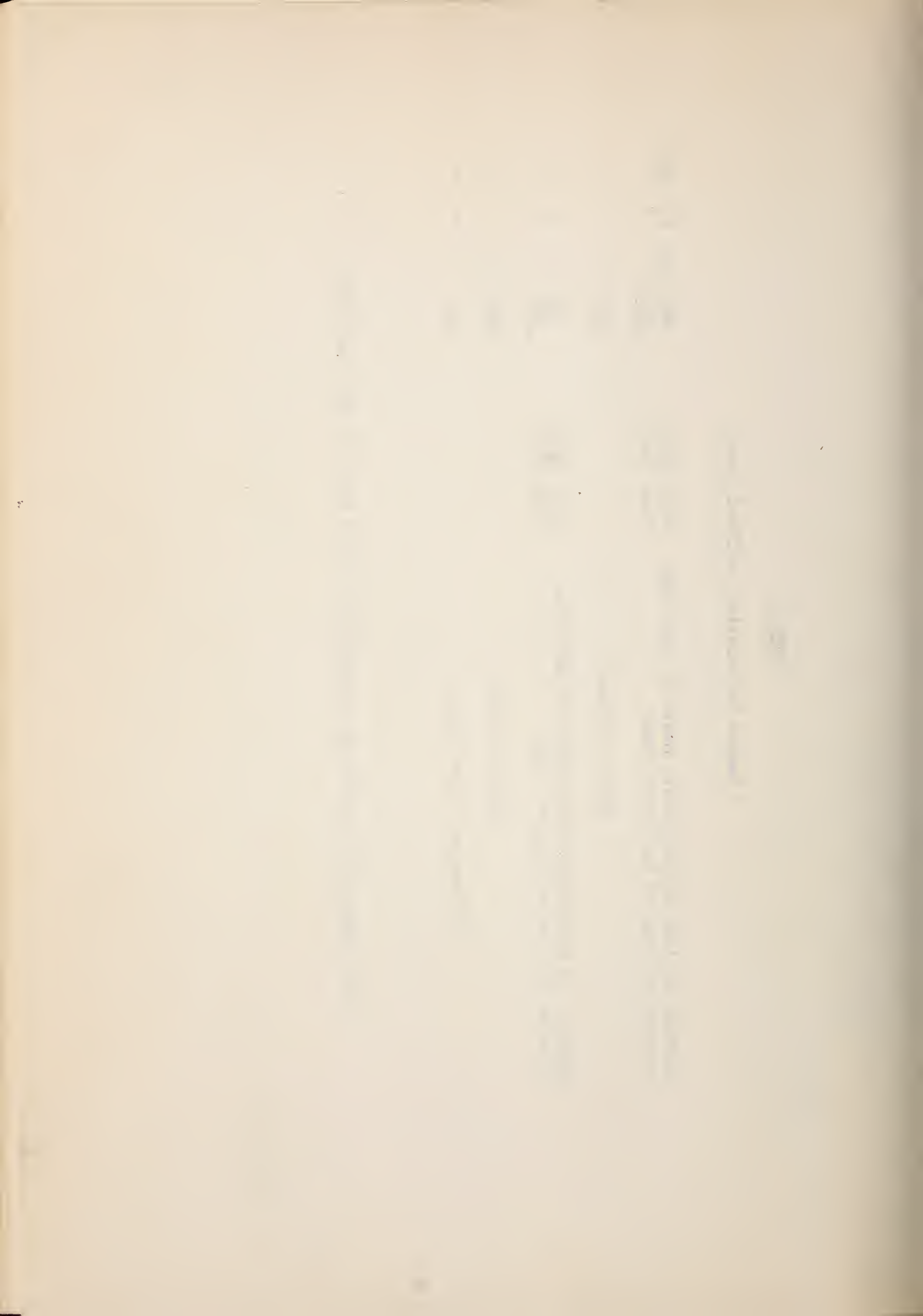


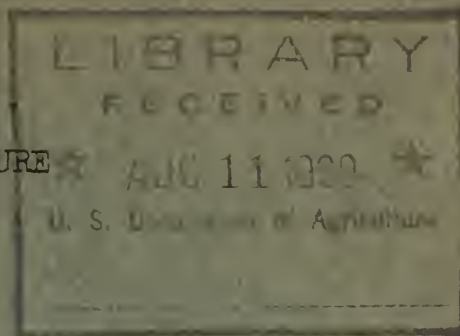
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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
Region Eight
Albuquerque, New Mexico



Hugh G. Calkins
Regional Conservator

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PROPOSALS FOR THE SANTA CRUZ AREA

Regional Bulletin No. 28
Conservation Economics Series No. 1
July, 1935



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INTRODUCTION

In February of 1935, under the joint auspices of the Land Program and the Office of Indian Affairs, a study was undertaken of an area of land in northern New Mexico. This study was known as the Tewa Basin Study. A significant part of the Tewa Basin Study was concerned with the Santa Cruz Valley.

The immediate objective of the study was to prepare the materials for an allocation, in accordance with need, of the use of large areas of submarginal land which had been purchased by the Land Program. The concept dominating this study was a regional concept, and one which recognized that the problems in the Tewa Basin resulted not from individual aptitude or lack of it but rather from a serious deterioration in the resources of this area, so that what from the standpoint of human livelihood was minimum essential use, was, from the standpoint of conservation of resources, disastrous over-use.

Into the Santa Cruz Valley, an area predominantly non-commercial and already over-burdened with a debt beyond any imaginable capacity to carry it, came Rural Rehabilitation, a branch of the Resettlement Administration. It came with a regional policy drawn from those areas of the United States where farming was primarily a speculation. In the Tewa Basin Study is contained an analysis of the relevance of this policy to the problem of secure livelihood in the Santa Cruz Valley.

This analysis, although not made for the Soil Conservation Service, is included here because the two reports that follow grew out of it. These reports represent a continuation of this analysis in terms of the concrete operations of Rural Rehabilitation and the initial statement of a proposal for a regional plan of rehabilitation for the Santa Cruz Valley.

The Resettlement Administration became interested in the proposal. The Soil Conservation Service believed, however, that additional study was necessary before the plan for regional rehabilitation could enter on its administrative phase. To this end a further and more detailed study of the Santa Cruz Valley was instituted as a joint undertaking of the Resettlement Administration and the Soil Conservation Service. This study is now in the process of analysis and will be completed within the near future. It belongs with the reports appearing in this folder and will be added to them upon its completion as the most authoritative statement possible at this time on the nature of human dependency in the Santa Cruz Valley.

The reports which follow are not in themselves definitive. They represent, rather, the development of an idea from a generalized insight to a more specific analysis, and contain within them inadequacies as individual reports which they do not contain as a collective statement which is both progressive in time and progressive in content.

FAILURE OF RURAL REHABILITATION IN THE TEWA BASIN

(Originally included in the Tewa Basin Study)

May, 1935

FAILURE OF RURAL REHABILITATION IN THE TEWA BASIN

The notion of Rural Rehabilitation as a part of the operations of the Federal Emergency Relief Administration depends upon a general conviction that the problem of rural relief should be met differently from that of urban relief. No matter what the condition of the labor market, however great is industrial employment, the agricultural family is reckoned to own one vital asset over and above labor, and that is land.

The possession of land, then, makes rural relief a distinct problem. For purposes of administrative classification, all individuals owning and farming land are willy-nilly subject, if they are in need, to a single administrative philosophy. It will not be necessary to dwell on the fact that the subsistence farmer and the commercial farmer, the farmer with thirty acres and the farmer with three, represent markedly different situations and will have different needs. Rural Rehabilitation boards are supposed to be amply protected from significant individual variations within their jurisdictions by the consideration of each family as a separate and distinct problem.

However, in the Tewa Basin, the individual variations are relatively few. The region has a consistency and a pattern into which approximately eighty-five per cent of the population

falls. This pattern, nevertheless, is not similar to the pattern of commercial agriculture upon which the program of rehabilitation is premised. The Tewa Basin, an area in which sixty-five to seventy per cent of the population are on relief, occupies a kind of No Man's Land between a rehabilitation program based upon commercial agriculture and the legitimate child of that program--an individual case treatment of each rehabilitation problem.

Commercial agriculture is the keynote. If the Rural Rehabilitation Corporation, a subsidiary of the Resettlement Administration, lends money, it does so at a five per cent annual interest charge. Likewise, since each of these loans is designated to be self-liquidating, the economic activity of each person borrowing money must be adjusted to the requirements of the Rehabilitation Corporation rather than to the needs of the individual or the advantage of the region. The problem becomes one of credit banking and the test applied is that of the ability of the individual to repay. There is no objection to be offered to sound business practice. However, when an organization obligated to sound business practice undertakes virtually complete responsibility for the rehabilitation of an area, certain fundamental contradictions appear.

The first of these contradictions is especially well marked in the Tewa Basin. The amount and fertility of the

land he owns is the collateral that the rehabilitation client puts up for his loan. It will be clear that in order for a farmer to assume a cash obligation and the interest charges upon that obligation he must have enough land to raise an agricultural surplus. Without this surplus there is no possibility of repayment. In the Tewa Basin it is usually estimated that a minimum of eight acres of irrigated land is necessary for the subsistence of a family of five. Something over eight acres would be necessary if a surplus is to be produced. An intensive study of the Tewa Basin shows that the average holding of irrigated land in the area is four and a half acres per family of five. A conservative estimate would place the percentage of families owning less than eight acres of land at eighty per cent of the total families of the region. In short, at least eighty per cent of the families--the eighty per cent most in need of rehabilitation are not eligible for assistance. Rural Rehabilitation becomes a credit mechanism which as interpreted by local policy applies to the marginal farmer in an area where the standard of living of the vast majority of the population is sub-marginal. That it is not the intention of the Rural Rehabilitation program to neglect this portion of the population seems clear from orders recently promulgated to the effect that all rehabilitation cases accepted must be on relief. Had this policy been operative up to the present

the rehabilitation program in the Tewa Basin would have been virtually non-existent.

A recent letter from the State Director of Rural Rehabilitation informs us that Rio Arriba County (in which most of the Tewa Basin lies) has ninety-three clients, Taos County seventy-nine, Mora County one hundred fifty-two, etc. To quote from the director's letter: "In the course of the year 1935, these people should receive \$1,327,000 for various purposes, including subsistence, new buildings and repairs to old, work animals, dairy cattle, beef cattle, sheep and goats, hogs and poultry; also new machinery and equipment and repairs to old, household equipment, feed, seed, irrigation charges, hire of machinery such as threshing machines, taxes, interest, insurance and miscellaneous."

Just why they should receive \$1,327,000 or any other definite sum is not clear. Presumably this is determined by the size of the appropriation which, in turn is determined by factors not directly traceable to the needs of the area.

The terms that have been adopted by Rural Rehabilitation in referring to those to whom loans have been made alternate between the term "risk" and the term "client." Risk seems to be used for private thinking and client for public thinking. However, the concept to which all of the terms refer is that of individual need or individual failure.

If the problem were viewed realistically several facts would emerge. In the first place, it is not the individual who has failed, but the area. Resources have been dwindling while population increased. The size of land holdings has become progressively smaller. The individual failure who is assisted by Rural Rehabilitation is, for the area, the relatively prosperous farmer. If it were recognized that the problem was one of rehabilitating an entire area rather than a series of eligible individuals, Rural Rehabilitation in the Tewa Basin might be able to show a beneficial effect rather than its present impotent handling of a serious situation.

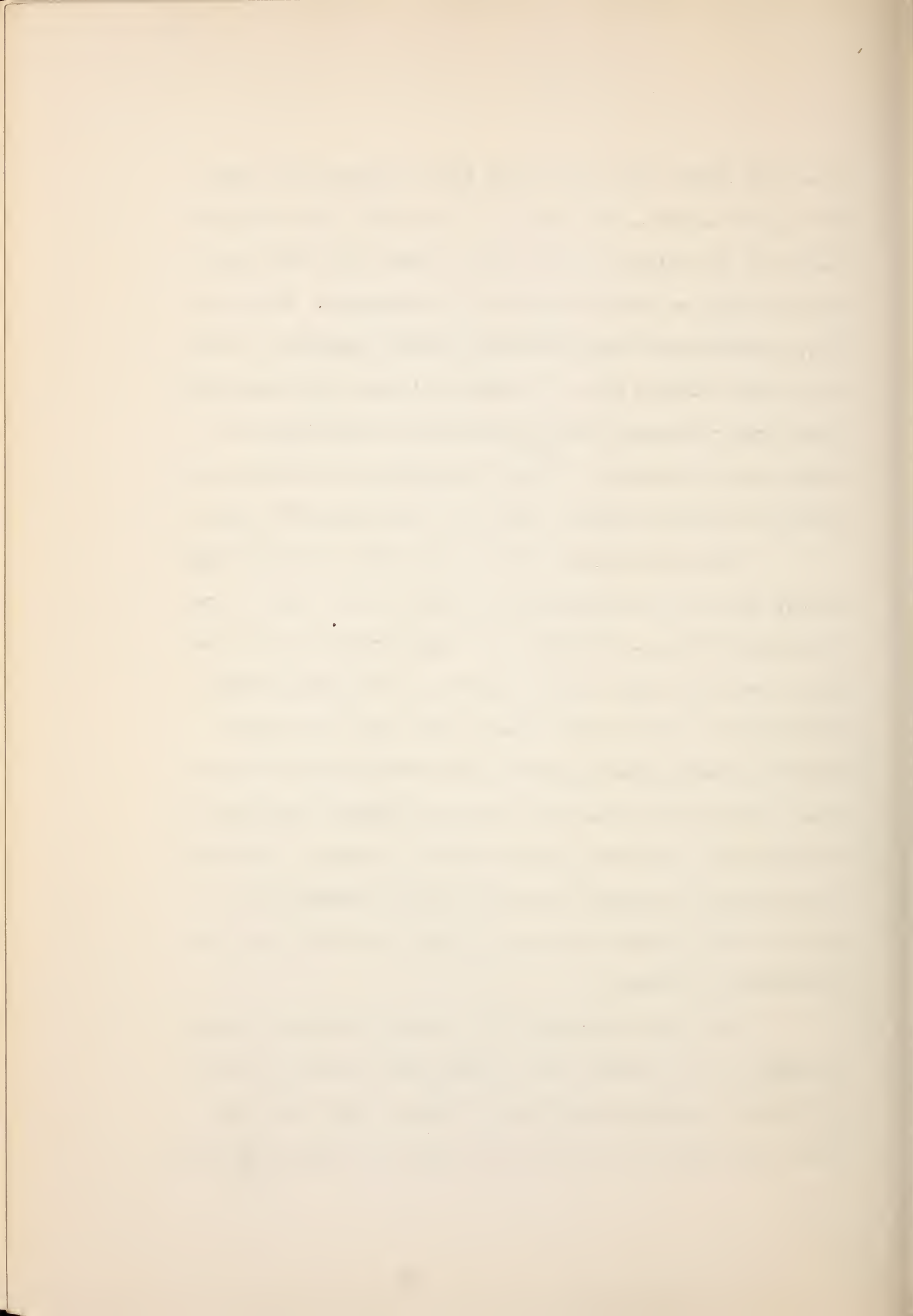
Rural Rehabilitation in the Tewa Basin seems to be unable to make the elementary distinction between cash crops and surplus crops. Before a loan is made in this area, an area which has done subsistence farming for centuries, it becomes necessary to make a plan for the individual for whom the loan is contemplated. This plan concerns the means whereby the individual will be enabled to repay his loan plus interest. Obviously, the first thing that must be done is to develop a cash crop. This is the invariable first step. The subsistence farmer must become a commercial farmer. Almost inevitably this change in the ratio between subsistence crops and cash crops redounds to the disadvantage of the farmer for he has ordinarily neither land enough in cash crops to become a successful



commercial farmer, nor land enough left in subsistence crops for his own support. The area is not one which would suggest commercial agriculture to anyone but a banker who has loaned money and sees no other prospect of its repayment. Roads are poor, transportation unsatisfactory, markets extremely limited and land holdings tiny. In addition to this the subsistence farmer (now commercial) must depend upon the storekeeper for a much greater proportion of his food supply and must find some place in his scanty revenue, funds for the middleman's profit.

The impracticality of the region for commercial agriculture has not gone totally unrecognized by the county rehabilitation officers. However, the remedy proposed would represent the final steps in the ruination of the small farmer. Being unable to distinguish between cash crops and surplus crops the county planning board of Rio Arriba County has proposed a commercial cannery for the more efficient marketing of products which the farmer cannot afford to market. Commercial canneries are designated for regions where a surplus exists, they are not intended for areas in which less than enough for subsistence is raised.

The local enthusiasm for a canning factory is understandable on two counts. The cannery would provide the cash to pay off the rural rehabilitation loans. Where the money would come from for the incidental purpose of keeping the farmer



alive is not yet determined. The second basis of local support will be clear when it is understood that the cannery is not projected as being for the exclusive use of rehabilitation clients but for the benefit of the general public in the area. A closer definition of the term "general public" would develop the fact that part of what is meant by the phrase is the Santa Cruz Real Estate & Loan Co. which has acquired in a barely legal manner some four hundred acres of irrigated land wrested from small farmers (See Report on Chinayo). If the cannery were installed a number of sharecroppers might be employed to cultivate the land. The produce would be canned and sold.

The second proposal for the rehabilitation of the population at present ineligible for assistance is resettlement. To begin with, the culture of the Tewa Basin is centuries old, and has become identified with the landscape and the farm on which many generations of Spanish-Americans have lived. An effort to remove them would be resisted by the supposed beneficiaries themselves. Even if we assume that the surplus population would willingly move, the plan is impracticable on another count. In order that the average size of land holdings might be increased to fourteen acres (a figure considered very small by the State Rehabilitation Office) it would be necessary to resettle three thousand families from the Tewa Basin alone. The one previous resettlement project in New Mexico gave each

family more than thirty acres of irrigated land. On the basis of thirty acres for each family (a figure which is not excessive when it is realized that the land and seed and machinery and dwelling must be paid for at five per cent interest) 90,000 acres of irrigated land would have to be found for the surplus population of the Tewa Basin alone. Not ten per cent of that land is available at present. The cost of irrigation projects, whether sound or not, would be saddled upon the farmer. In short, even if it were possible (which it is not) to bring into cultivation 90,000 acres of irrigated land for the Tewa Basin alone it would be a very dubious undertaking.

Rural Rehabilitation has completely failed to touch the realities of the economic plight of the Tewa Basin. No attempt has been made to study the region in order to determine the type of rehabilitation that would be suitable to the area. High rehabilitation officials have expressed surprise when informed of the actual size of the landholdings, and have indicated complete lack of the most elementary and essential factual information. The policies developed as suitable for farm rehabilitation in Iowa have been set up as the model for farm rehabilitation in the Tewa Basin. It assumes that credit in itself is a resource. It is not. Credit without a real increase in production is simply another five per cent debt. It assumes that production relief is necessarily sounder than

subsistence relief. Production relief which does not affect the basic resources of the area is not in any sense of the word rehabilitation but simply another form of relief which the farmer contracts to repay without any increased facility for repayment. The conclusion must be faced. Rural Rehabilitation in its present form and operating under its present philosophy of "sound banking" can do nothing to solve the basic economic problems of the area.

RURAL REHABILITATION IN SANTA CRUZ

July, 1935

RURAL REHABILITATION IN SANTA CRUZ

Rural Rehabilitation as practiced in the Santa Cruz Valley suffers from several major contradictions. First and foremost of these it has applied a national policy, obviously formulated with commercial agriculture in mind, to an area in which subsistence agriculture is predominant. The great majority of all rehabilitation loans made have been made to families who were being supported by direct relief. The theory was that by some economic force the application of credit to an agricultural economy would bring about self-sufficiency. Of all funds loaned to 35 borrowers, analysis shows that 49 per cent of all money was for direct subsistence. This was an expense that the government formerly accepted on the theory that these families which it was aiding were unable to provide their minimum needs. At present by a process consisting of little more than a change of administration the supposition is that they are not only self-sufficient but will raise and market a sufficient surplus to pay off a debt contracted by them to the Rural Rehabilitation Corporation for the subsistence that was once granted them as a condition of survival.

For each loan that is made a plan of repayment is formulated. This plan contemplates repayment of all moneys loaned for subsistence and operating expenses within one year. Since the amount of the loan is roughly limited by the

rehabilitation agent's estimate of the borrower's income, the loan is always less than the estimated income. However, the basic question is, as always, if the borrower is sufficiently solvent to be extended credit, why was he on relief? It should be understood that neither the farmer's productivity nor his income has been measurably increased.

The justification for the loan is entirely in the bookkeeping. Both yield and price are tremendously inflated in estimates of income. Land which was reckoned as highly productive at $2\frac{1}{2}$ tons of alfalfa to the acres burgeons forth in the bookkeeping and produces 5, alfalfa which is at present selling at \$8 and \$10 a ton suddenly commands \$20. One of the Rehabilitation officials, upon being questioned as to the realism of his assumptions of price, replied that the alfalfa would be sold in the spring when it commanded a price of \$20 a ton. When he was further questioned as to the effect of sudden sale of accumulated alfalfa on the price of the commodity the answer given was that there was such a shortage of alfalfa in the area that it would have no influence on price.

It might, of course, be pointed out that there is no facility for the storage of alfalfa, that a substantial portion of the alfalfa would not be first grade, that if repayment to the Resettlement Administration was required in December there would be no opportunity to save the alfalfa



for spring sale. However, only major inconsistencies will be touched on here.

A crop figuring prominently in repayment plans in this area is chili. Chili although a commercial crop in the Santa Cruz Valley is not a cash crop. A large part of the chili crop is mortgaged in advance to the local stores and no cash is given for it. It is used by the merchants as a means of securing payment on credit advanced to the farmer for subsistence the preceding year. It is safe to say that repayment of rehabilitation loans from sale of the chili crop will be exceedingly slow.

The local rehabilitation office's notion of increasing the borrower's income has been to tell all and sundry to plant garden crops. The metropolis in which these garden crops would be marketed is the City of Santa Fe with a population of 11,000 which is apparently well supplied with garden produce from other sources. One borrower, a Mr. Fitzgerald, who had agreed to repay his loan of \$471 by December, 1935, has taken his onions to market and brought them home again. Although he has paid nothing on his loan, he has presented the county Rehabilitation office with 6 specimen onions.

A very small percentage of all crops produced are, under present repayment programs, to be retained by the producer. It may be well to emphasize again that this same producer

was unable, while retaining most of his produce, to stay off the relief rolls. The marketable surplus is not clearly visible.

In Santa Fe County a total of \$1188, or 13 per cent of all money loaned, was loaned to pay back water taxes to the Santa Cruz Irrigation District. This represents a settlement of 25 cents on the dollar or an accumulated indebtedness of nearly \$5,000. It is permissible to wonder how, if this indebtedness has accumulated in the past, facilities for repayment are increased at present.

A total of \$1551 or 17 per cent of all money loaned, was loaned to pay old debts. These loans, with the exception of one large expenditure to buy out a mortgage, went to satisfy back store bills at local merchants. A philosophy of paternalism was substituted for laissez-faire and the government assumed the bad debts of the store.

It should always be held in mind that these loans are secured by chattel mortgages. If the government invokes these mortgages, a severe penalty will be visited upon the farmer for administrative errors. If they are not invoked the Rural Rehabilitation Corporation may as well write off moneys expended in the Santa Cruz region as uncollectable debts.

Those families who have borrowed from Rehabilitation funds have been written off relief. Theoretically, they are no longer being supported at public expense. However, as was

pointed out earlier, 49 per cent of all moneys expended in that part of the Santa Cruz region lying in Santa Fe County was used for direct relief. A comparison of the subsistence budget allowed by the relief office and that allowed by the rehabilitation program demonstrates that in almost all cases the same families have a higher standard of relief under Rural Rehabilitation than under direct relief.

The situation has become a very serious one. All families who have borrowed from rehabilitation funds are now not eligible for direct relief or work relief. Instructions have been received that subsistence is to be allowed no longer to rehabilitation cases. From the social work supervisor of Rio Arriba County comes word that relief cases, responsibility for whom has now been assumed by the Rehabilitation office, are returning to her and asking for food. She has had to tell them that Rural Rehabilitation solely was charged with their care. Human needs in the Santa Cruz region promise to be acute this winter.

The failure of Rural Rehabilitation in the Santa Cruz region must be laid to a variety of factors. More important than all others is the fact that the administrative philosophy was inadequate for a non-commercial economy. The low level of livelihood in the Santa Cruz region cannot be accounted for on the basis of personalities. It is an entire economy

that is deficient. This will become all the clearer when it is realized that the land holdings for all the rehabilitation "clients" in the Santa Cruz region average 12 acres. The average of all land holdings in the Santa Cruz region does not exceed 5 acres for each family.

IMMEDIATE RECOMMENDATIONS FOR SANTA CRUZ

IMMEDIATE RECOMMENDATIONS FOR SANTA CRUZ

Information available in the county offices of the Rural Rehabilitation Division and the Emergency Relief Administration has been summarized in the accompanying tables and memoranda. The following seems clear:

A. The attempted rehabilitation consisted in extending credit to individuals primarily engaged in non-commercial agriculture. In a majority of cases, no enlargement of the basic resources could be expected as a result of the loans. Rather, loans were made to allow the operation of already existing resources which had previously proved inadequate. There was a temporary increase in the spending power, but the real result was an increase in the amount of money owed without a corresponding increase in productivity over and above debt.

B. The majority of the people who obtained loans through Rural Rehabilitation were former relief cases. If relief may be considered a measure of need, no realistic rehabilitation could have been anticipated without the institution of measures designed to increase the basis of livelihood.

C. The loans required cash repayment. The manner of repayment was predicated on several assumptions:

- (1) The existence of a market

- (2) The possibility of a substantial surplus over subsistence
- (3) The receipt of top prices for all produce.

None of these assumptions was justified.

The presence of subsistence loans on the books of the Rural Rehabilitation Division is a contradiction in thought. This distribution of money for food could only have been recoverable if adequate provision had been made for an increased productivity. Since no such provision was made, the distribution of this money should not be considered a loan.

The area is already burdened with a greater debt than its productivity warrants. Widespread refinancing operations may result in a lowering of carrying charges but, in themselves, will not result in rehabilitation.

The refinancing activities of the Rural Rehabilitation Division may be endorsed as a palliative. It is not clear, however, why the Rural Rehabilitation Division considered it necessary to refinance the debts to private stores. It is a well established practice in the area to mark up prices on credit sales by some 10 per cent over cash sales. The Bond & Nohl Company of Espanola, the store doing the most extensive credit business in the area, has indicated that their loss from bad debts, even including the depression years, has not exceeded

four per cent of their total credit sales.

In the light of the above, the following recommendations are made:

1. Transference of all subsistence loans to the category of grants.
2. Re-examination of all plans of repayment with a view to revising all over-estimates of production, price, and anticipated surplus.
3. The immediate creation of a rehabilitation area in the Santa Cruz Valley in which refinancing and credit operations will be closely integrated with a broad scheme of the development of resources.

PROPOSALS FOR THE SANTA CRUZ AREA

August, 1935

PROPOSALS FOR THE SANTA CRUZ AREA

The Need: As has been indicated elsewhere, the basic reason for the failure of rehabilitation work in this area to date is the attempt to rehabilitate individuals and not the area as a whole. If every individual family from Santa Cruz to Truchas were extended rehabilitation credit and if the circumstances and methods of production were not changed, the area still could not support itself. In considering the need of a far-reaching areal rehabilitation plan, it must be borne in mind that the people here have not had to depend upon the agricultural production of their land nor upon their limited livestock operations for all of their livelihood for sixty years and longer. Prior to 1880, the annual buffalo hunting expeditions, as the older men in the region remember, produced a considerable portion of the meat supply; and since then the wage work of practically all the men in the area has supplemented their agricultural income. Today the fact must be faced that the possibility of supplementing agricultural income from outside sources practically vanished during the depression, and that there is little likelihood that wage work will regain its dominant position as the chief source of livelihood. The problem in its most basic nature, then, is to discover the form of public subsidy that will be least costly and most productive in welfare.

The Area: This outline plan has been drawn up to apply to the portion of the Tewa Basin made up of the Santa Cruz River valley from Santa Cruz to Sactuario, but also including the communities of Rio Chiquito, Cundiyo, Cordova, and Truchas which are located on the fringe of this valley. The experimental nature of the plan is fully realized, and the area has been chosen because more of the factors essential to the success of areal planning are to be found here than in any other area in the Tewa Basin of a size suitable for experimentation. Here is an almost complete cultural and economic homogeneity with a common language, variations in wealth which are slight, and a widespread economic necessity that has disposed the people to support practically any change that promises betterment. The area has in its twenty miles of length a wide variation in climate and soils. The altitudes vary from 5800 feet at Santa Cruz to nearly 8000 feet on the Truchas plateau. The soil is fertile and capable, under scientific management of meeting the food requirements of a highly concentrated population. The people are well acquainted with cooperative methods in production, and area wide cooperation will only be extending to a wider basis methods of cooperative enterprise and production which have been common in the past. In this area is found an example of Spanish-American culture as indigeous to the soil

as the adobe houses in which the people live.

THE PLAN

1. The basic assumption is that whereas the region has not been self-sufficient to date, when the production unit has been the single family, it will undoubtedly be more nearly so if production is planned and carried forward on an areal basis.

The preliminary essential to such a change in the method of production is the instituting of an administrative mechanism. A governmental agency, with the powers to coordinate all government activity within the area should take charge of administration. Under this administrative guidance, the necessary organizational work among the people could be carried forward. The most essential portion of such work would be the formation of a regional barter association, the members of which would farm their lands according to the direction of the administration, and in conformity with a plan of area wide non-commercial agriculture.

2. The people: On consideration of the problem, certain factors emerge. First, that the people who are able to engage in agriculture on a commercial basis at the present time - i. e., those with comparatively large landholdings -

would probably be unwilling to enter into any sort of regional plan based on non-commercial agriculture. Even if they were willing to enter into such a plan, it is felt that those with large landholdings would be a disruptive element in the essential homogeneity. It is proposed, therefore, to limit the application of the plan to those families whose holdings do not exceed 1.5 acres per individual in the family. Likewise it is felt that the admission of landless individuals into the plan would place an unfair burden upon the region. It is, therefore, proposed to limit admission to those who have at least a minimum of .5 acre per individual in the family. Careful estimates indicate that this would limit the number of families eligible to enter the plan to 600. As the average size of the families in the area is approximately 5, the number of individuals affected would be about 3000; and the acreage per family would vary from 2.5 acres to about 8 acres. This would leave approximately 100 landless families in the region to be taken care of in some other manner. The rural Rehabilitation Corporation could, under its credit extending policy, plan for those with more than 8 acres of land.

Communities to be included from Santa Cruz eastward, total population of each and the number of families eligible to enter the plan are shown in table;

TABLE

| Community | Population | Total No. of Families | Approximate No. of families eligible |
|-----------------|------------|--------------------------|---|
| Santa Cruz | 710 | 150 | 70 |
| Cuarteles | 149 | 36 | 30 |
| Puebla | 177 | 34 | 30 |
| Ranchos (Llano) | 464 | 89 | 80 |
| Plaza Abajo | 49 | 13 | 12 |
| Ajuelos | 38 | 11 | 10 |
| Ortiz | 28 | 7 | 6 |
| Cuchilla | 53 | 10 | 9 |
| Bocas | 50 | 9 | 8 |
| Pachecos | 38 | 8 | 8 |
| Rincon | 66 | 14 | 12 |
| Potrero | 184 | 37 | 33 |
| Plaza del Cerro | 242 | 58 | 50 |
| Rio Chiquito | 93 | 18 | 16 |
| Cundiyo | 122 | 22 | 21 |
| Cordova | 395 | 79 | 70 |
| Truchas | 1010 | 200 | 160 |
| Total | 3868 | 795 | 625 |

3. The diet habits and basic food requirements:

Close investigation indicates that the basic yearly food requirements for a family of five individuals is, at the present

time, as follows:

Wheat 50 bu. Per year (2200 lbs. of flour)

Peas 2.75 bu. Per year

Beans 100 lbs. " "

Ground chili 25 lbs. " "

Alfalfa (for stock) 2 tons " "

Eggs, meat, lard, corn, melons and other fruit, and milk also form a part of the diet, but in undetermined quantities. Provision of this portion of the diet will be outside the field of cooperative enterprise for the present.

A rough estimate of the total basic food requirement for the population involved, then, is as follows:

| | |
|----------------------------|-------------|
| Wheat | 30,000 bu. |
| Peas | 1,650 bu. |
| Beans | 60,000 lbs. |
| Ground Chili | 15,000 lbs. |
| Onions | 60,000 lbs. |
| Alfalfa | 1,200 tons |
| Mixed Vegetables and Fruit | |

The supervision of the production and distribution of this basic requirement would be the chief function of the cooperative barter association.

4. The Method of Distribution and Exchange:

The plan as outlined will involve a departure from



the customary methods of agriculture that have prevailed in the area. However, here it would represent a return, in an extended way, to methods of cooperation that were common in these communities fifty years ago. If individual non-commercial agriculture is to be successfully replaced by areal non-commercial agriculture, that success must depend not only upon cooperation in production, but upon cooperation in distribution and exchange as well.

To the end that the farmer who is now specialized in his crop production may be supplied with the crops which he formerly produced himself, a cooperative barter association must be formed which would have as its function the determination of crop equivalences. That is to say, that the number of bushels of wheat or peas that are exchangeable for a given quantity of chili or alfalfa, would be set by the barter association. These equivalences must not be determined altogether by current market price for current market price is determined by a number of factors somewhat irrelevant to an areal non-commercial agriculture. Although traditional barter equivalences still exist in the area it is doubtful whether these can be utilized. These equivalences strongly favor the chili growers at the expense of the wheat producers. It is, of course, essential that if a given farmer is encouraged to give his land over to wheat so that another

farmer may concentrate on chili the ratio of exchange of wheat for other crops must be sufficiently favorable to supply the wheat farmer with more agricultural produce than he would have realized from diversified subsistence farming. The following equivalences are suggested as more favorable to equitable distribution and exchange. They are, of course, approximate and were arrived at by a consideration of comparative yield per acre of the various crops involved adjusted for the greater or lesser amount of labor involved in the production of each.

Flour Equivalences

| | |
|--|------------------|
| 1 lb. ground chili | 4 lbs. of flour |
| 20 lbs. peas | 25 lbs. of flour |
| 4 lbs. onions | 1 lb. of flour |
| 2 lbs. fruit & miscellaneous vegetables | 1 lb. of flour |
| 1 lb. beans | 3 lbs. of flour |
| 4 lbs. alfalfa | 1 lb. of flour |

The equivalences for all crops listed here can be arrived at easily from the above table.

Equivalences are given here in terms of ground chili and flour rather than in terms of wheat and string chili because it is recognized that the equivalences listed above would be from the native point of view weighted too



heavily in favor of wheat. It is, therefore, proposed that the government assume the costs of grinding the chili and the wheat, using this service as the means by which a more favorable rate of exchange of wheat for chili may be achieved.

Inasmuch as no very suitable land is available within the area for the production of beans which nevertheless constitute a staple of diet, the use of land within the region for the growing of beans would probably constitute uneconomic use. It is suggested that the commerce between Chimayo and the San Luis Valley which flourished before 1929 be revived. The Chimayo chili and fruit, of which there will be a considerable surplus, has in the past and might under the proposed plan be again exchanged for the excellent San Luis Valley beans, peas and potatoes, in sufficient quantities to supply the entire Santa Cruz region with these commodities.

Although it is not expected that there will be any significant surplus for the area even under a rational system of agriculture, some surplus particularly of chili will probably exist. Rather than the haphazard marketing of agricultural products that has existed in the past, it is proposed that a cooperative marketing organization be established in conjunction with a small cooperative cannery. Surplus chili, vegetables, and fruits may be canned to supplement the winter's food; and whatever surplus may exist after the diet requirements

are met could be cooperatively marketed. It is further proposed that whatever money may result from the sale of this surplus should, rather than be distributed in the form of cash to the producer of the surplus, be used for the establishment of a cooperative store which could supply to the area, at a considerable saving, the staples which it requires but cannot produce, e. g., lard, sugar, coffee, baking powder. Each surplus producer might receive a credit at the store to the amount of his share in the cash proceeds of the cooperative sale of his product. This would have the effect of increasing the real income of the producer of surpluses and at the same time make available the benefits of the cooperative store to the entire area.

5. Land and Land Utilization: All the land under cultivation is irrigated land, and may be divided into two divisions: the land in the Santa Cruz Irrigation District and land not in the Santa Cruz Irrigation District. The land not in the district is under incorporated ditches flowing out of the Truchas creek, the Rio Quemado, the Rio Medio, and Rio Frijoles. The last two unite at Cundiyo to form the Santa Cruz River. Below Cundiyo several ditches flow out of the Santa Cruz River. At the present time, the extent of the total acreage of land, in and out of the irrigation district for each of the communities involved is shown in the table:

TABLE II

| Community | Total Irrigated Acreage | Approximate Acreage to Enter Plan |
|-----------------------------|-------------------------|--------------------------------------|
| Truchas | 1000 | 800 |
| Cundiyo | 60 | 60 |
| Cordova | 480 | 250 |
| Rio Chiquito | 40 | 40 |
| Sanctuario) Chimayo | 1000 | 800 |
| Plaza del Cerro) | | |
| Rest of Chimayo) Irrigation | 5000 | 1500 |
| Santa Cruz) District | | |
| Total | 7580 | 3450 |

All the rest of the land is under the Santa Cruz Irrigation District.

The original acreage included in the Santa Cruz Irrigation District was 8,000 acres. This was an over-estimate but apparently was not due to dishonesty on the part of the promoters; it was probably due to a mistaken belief in the possibilities of the area. Some 1,500 acres were subsequently taken out of the district, 1,200 acres of this being Public Domain but this still left 1,300 acres above the irrigation ditches, and hence non-irrigable. There are, then, only 5,200 acres actually under the ditches, and a great deal of this, probably 15 to 20 per cent is non-usable, or fit only for meadow. This land includes the 350 acres in Chimayo, and all the land west of the end of the Mar-

| TABLE I | | 1900 |
|---|--------|------------|
| The number of persons in the population of the United States, by age and sex, in 1900 | | |
| Age | Sex | Number |
| Under 15 | Male | 14,000,000 |
| Under 15 | Female | 14,000,000 |
| 15 to 24 | Male | 10,000,000 |
| 15 to 24 | Female | 10,000,000 |
| 25 to 34 | Male | 8,000,000 |
| 25 to 34 | Female | 8,000,000 |
| 35 to 44 | Male | 6,000,000 |
| 35 to 44 | Female | 6,000,000 |
| 45 to 54 | Male | 4,000,000 |
| 45 to 54 | Female | 4,000,000 |
| 55 to 64 | Male | 2,000,000 |
| 55 to 64 | Female | 2,000,000 |
| 65 to 74 | Male | 1,000,000 |
| 65 to 74 | Female | 1,000,000 |
| 75 and over | Male | 500,000 |
| 75 and over | Female | 500,000 |
| Total | Male | 40,000,000 |
| Total | Female | 40,000,000 |

The above table shows the distribution of the population of the United States by age and sex in 1900. The population was 80,000,000 in 1900, and the distribution was as follows:

The population of the United States in 1900 was 80,000,000. The population was distributed as follows by age and sex:

Under 15: 14,000,000 males, 14,000,000 females

15 to 24: 10,000,000 males, 10,000,000 females

25 to 34: 8,000,000 males, 8,000,000 females

35 to 44: 6,000,000 males, 6,000,000 females

45 to 54: 4,000,000 males, 4,000,000 females

55 to 64: 2,000,000 males, 2,000,000 females

65 to 74: 1,000,000 males, 1,000,000 females

75 and over: 500,000 males, 500,000 females

Total: 40,000,000 males, 40,000,000 females

tinez Ditch to Santa Cruz. The land in the Irrigation District is supplied by 13 large ditches and 3 small ones. The upkeep on the ditches is high. Every rainstorm that sends water down the 16 arroyos that enter the valley from the north wrecks the ditches at all but one of these (here a flume has been built by the landholders) for stretches varying from 60 to 200 yards. The upkeep of the ditches is the affair of the landholders using them; consequently, the men spend on the average of 40 to 60 days each per summer fixing the ditches. They are left without water for at least 30 days each summer.

Of the total acreage of 5,200 in the Santa Cruz District, the approximate number of acres that would enter the plan, excluding the large landholders, is 1,500 owned by some 275 families.

Thus the total acreage involved will be approximately 3,400.

The acreage necessary, according to the best available estimates of yield, to produce the basic food requirements would then be as follows:

| | Average yield per acre | Acres required |
|--------------|---------------------------|----------------|
| Wheat | @ 20 bu. | 500 |
| Peas | @ 12 bu. | 138 |
| Ground chili | @ 300 lbs. | 50 |

| | | |
|---------------------|-----------------------|--------------|
| Onions | @2000 lbs. | 30 |
| Alfalfa | @ $1\frac{1}{2}$ tons | 800 |
| Vegetables & Fruits | | <u>1,800</u> |
| | | 3,318 |

Beans would be bought elsewhere by the surplus chili produced. It would require on the average 1 lb. of ground chili to buy 5 lbs. of beans. Therefore, it would require the product of 40 acres in chili to produce the necessary amount of beans.

The total acreage essential to produce the basic food requirements is 3,358, or approximately the entire acreage not available. This does not take into account the acreage necessary to produce the seed which, according to available estimates, would be as follows:

| | | | |
|------------|---------------------|----------|-------------|
| Wheat | @ 70 lbs. per acre: | 1750 bu. | 88 acres |
| Peas | @ 60 lbs. per acre: | 138 bu. | 12 " |
| Chili | Approximately | | 1 " |
| Onions | " | | 1 " |
| Alfalfa | " | | 1 " |
| Vegetables | " | | <u>10</u> " |
| | Total | | 114 acres |

Thus the approximate acreage in addition that would be needed for seed purposes is 114 acres.

As Truchas is the best wheat land, it is felt that it would be advisable to concentrate the production of wheat there, and thus allow the land elsewhere to concentrate on crops that would insure greater productivity per unit of land.

It will be seen that the land available at the present time is insufficient to allow the production of the essential minimum food supply. In order to actually approach economic self-sufficiency and to assume the possibility of a surplus at some future date, it will be necessary to increase the usable land area. There are several possibilities of doing this. One possibility is the construction of a reservoir dam in the canyon of the Truchas Creek 7 miles above Truchas. This project would make available for irrigated use some 400 acres of land in the Llano Abeyta below Truchas which at the present time is used for dry farming about three years in five, and which would be very productive if a constant supply of irrigation water were assured.

Another possible project is the construction of another ditch from the Santa Cruz River to the Mesilla portion of the Irrigation District, open flats along the Rio Grande south of Riverside. Some 600 acres of flat land now in sparse weeds and browse would be made available. This land could be managed by the cooperative administration and could be made to supplement the Truchas wheat land in production. Further, this land is

essential to provide the people of Truchas and Santa Cruz an amount of land above the minimum requirements of the plan somewhat proportional to the surplus land in Chimayo and Cuarteles.

Certain costs must, of course, be assumed by the Government. The most important item would be the cost of a dam to be constructed above Truchas in the canyon of the Truchas Creek. This would store a four months' rapid flow of water which is at present lost in the bad lands of the Sebastian Martin Grant, and would open for irrigated cultivation some 400 acres of good land in the Llano Abeyta, a mile below Truchas. The second cost of this nature would be the cost of a ditch from Rio Santa Cruz to Mesilla and this would increase the available land by some 600 acres. Production figures will indicate the essential character of these land additions.

Other costs which would be of the nature of first or promotion costs would be the costs involved in constructing a barter association warehouse, a small cooperative cannery (preferably traveling) and a flour mill.

Another class of costs to be assumed by the Government would be of the nature of running or administrative costs. In this class would fall the costs of administering the barter association, a portion of the educational costs, the cost of financing and loan operations, and the cost of transportation

that the operation of the plan would involve. It would further be necessary, at least in the early stages, to finance the cooperative marketing associations.

